

Australian/New Zealand Standard™

**Portable fire extinguishers –
Classification, rating and performance
testing**



AS/NZS 1850:2009

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee FP-003, Fire Extinguishers. It was approved on behalf of the Council of Standards Australia on 9 December 2008 and on behalf of the Council of Standards New Zealand on 9 March 2009.

This Standard was published on 20 March 2009.

The following are represented on Committee FP-003:

Association of Accredited Certification Bodies
Australasian Fire Authorities Council
Australian Building Codes Board
Australian Competition and Consumer Commission
Certification Interests (Australia)
Consumers Federation of Australia
Fire Protection Association Australia
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testing**

First published in Australia as AS 1850—1976.

Second edition 1981.

Third edition 1994.

First published in New Zealand as NZS 4507:1978.

AS 1850—1994 and NZS 4507:1978 jointly revised, amalgamated and designated AS/NZS 1850:1997.

Second edition 2009.

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Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 9049 6

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FP-003, Fire Extinguishers, to supersede AS 1850—1997.

The Standard was originally prepared following a request from manufacturers to develop a system of classification and rating of fire extinguishers by test fires in order that an extinguishant could be given a rating appropriate to the class of fire. The ultimate classification and rating of an extinguisher or its recommended use is based on its fire-extinguishing potential, as determined by the appropriate tests.

The objective of this Standard is to facilitate the production and use of fit-for-purpose standardized fire extinguishers.

This edition has been revised to include minimum ratings for extinguishers relative to their size and the Class E test apparatus has been moved to an informative appendix.

The method of determining the pre-burn period for the Class A crib tests is now by the monitored mass process only. The start point of attack of the fire is at the point where a pre-determined mass of the burning crib has been reached. Class A classifications and ratings previously achieved by other methods will continue to remain valid.

It is pointed out that, irrespective of its fire-extinguishing potential, the extinguisher has to comply with the requirements of the appropriate Australian Standard according to its extinguishant.

In preparing this Standard, the Committee considered that water-type extinguishers are to have a classification and rating allotted without extinguishing an actual test fire in accordance with AS/NZS 1841.2, *Portable fire extinguishers—Specific requirements for water type extinguishers*.

This Standard sets out a series of type tests for fire extinguishers designed and manufactured to AS/NZS 1841 Series, *Portable fire extinguishers*, AS/NZS 4353, *Portable fire extinguishers—Aerosol type* and AS 4265, *Wheeled fire extinguishers*, to establish their fire-extinguishing potential. The tests cover an extinguisher's capability of controlling fires classified as A, B, C, D and F, together with the suitability of the extinguishants for use on fires involving energized electrical equipment.

The resulting classification, performance-rated values and capabilities are given on the label of each extinguisher to assist the purchaser in selecting the appropriate type of extinguisher for the expected hazard.

Requirements for portable fire extinguishers are specified in the following Standards:

AS/NZS

- 1841 Portable fire extinguishers
- 1841.1 Part 1: General requirements
- 1841.2 Part 2: Specific requirements for water type extinguishers
- 1841.3 Part 3: Specific requirements for wet chemical type extinguishers
- 1841.4 Part 4: Specific requirements for foam type extinguishers
- 1841.5 Part 5: Specific requirements for powder type extinguishers
- 1841.6 Part 6: Specific requirements for carbon dioxide type extinguishers
- 1841.7 Part 7: Specific requirements for vaporizing-liquid type extinguishers
- 1841.8 Part 8: Specific requirements for non-rechargeable type extinguishers

4353 Portable fire extinguishers—Aerosol type

AS

4265 Wheeled fire extinguishers

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Australian/New Zealand Standard
Portable fire extinguishers—Classification, rating and performance testing

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements for the classification, performance testing and rating of fire extinguishers.

1.2 APPLICATION

The materials, methods of manufacture and performance requirements of fire extinguishers shall comply with AS/NZS 1841.1, AS/NZS 4353 or AS 4265, which cover requirements for materials, methods of manufacture and performance of extinguishers and any associated compressed gas containers.

1.3 NORMATIVE REFERENCES

The following documents are indispensable for the application of this Standard:

AS

1074 Steel tubes and tubulars for ordinary service

AS/NZS

1841 Portable fire extinguishers

1841.1 Part 1: General requirements

1841.2 Part 2: Specific requirements for water type extinguishers

4265 Wheeled fire extinguishers

4353 Portable fire extinguishers—Aerosol type

ANSI

UL 711 Rating and Fire Testing of Fire Extinguishers

1.4 DEFINITIONS**1.4.1 Free-burn**

The time period from the ignition of the fire until commencement of attack.

1.4.2 Shall

Indicates that a statement is mandatory.

1.4.3 Should

Indicates a recommendation.

1.5 CLASSIFICATION

Extinguishers shall be classified by one or more letters designating the general class or classes of fire for which they have been found effective.